

In the Claims

Claims 1 6 (Cancelled)

7. (New) A seamless expandable oil country tubular article comprising: on a mass percent basis, about 0.010% to less than about 0.10% of C, about 0.05% to about 1% of Si, about 0.5% to about 4% of Mn, about 0.03% or less of P, about 0.015% or less of S, about 0.01% to about 0.06% of Al, about 0.007% or less of N, and about 0.005% or less of O; at least one of Nb, Mo, and Cr which are contained in the range of about 0.01% to about 0.2% of Nb, about 0.05% to about 0.5% of Mo, and about 0.05% to about 1.5% of Cr, so that equations (1) and (2) are satisfied; and Fe and unavoidable impurities as the balance:

$$\text{Mn}+0.9\times\text{Cr}+2.6\times\text{Mo}\geq 2.0 \quad (1)$$

$$4\times\text{C}-0.3\times\text{Si}+\text{Mn}+1.3\times\text{Cr}+1.5\times\text{Mo}\leq 4.5 \quad (2).$$

8. (New) The article according to claim 7, further comprising, instead of a part of Fe, at least one of about 0.05% to about 1% of Ni, about 0.05% to about 1% of Cu, about 0.005% to about 0.2% of V, about 0.005% to about 0.2% of Ti, about 0.0005% to about 0.0035% of B, and about 0.001% to about 0.005% of Ca.

9. (New) The article according to claim 7, wherein, instead of equations (1) and (2), equations (3) and (4) are satisfied:

$$\text{Mn}+0.9\times\text{Cr}+2.6\times\text{Mo}+0.3\times\text{Ni}+0.3\times\text{Cu}\geq 2.0 \quad (3)$$

$$4\times\text{C}-0.3\times\text{Si}+\text{Mn}+1.3\times\text{Cr}+1.5\times\text{Mo}+0.3\times\text{Ni}+0.6\times\text{Cu}\leq 4.5 \quad (4).$$

10. (New) The article according to claim 8, wherein, instead of equations (1) and (2), equations (3) and (4) are satisfied:

$$\text{Mn}+0.9\times\text{Cr}+2.6\times\text{Mo}+0.3\times\text{Ni}+0.3\times\text{Cu}\geq 2.0 \quad (3)$$

$$4\times\text{C}-0.3\times\text{Si}+\text{Mn}+1.3\times\text{Cr}+1.5\times\text{Mo}+0.3\times\text{Ni}+0.6\times\text{Cu}\leq 4.5 \quad (4).$$

11. (New) The article according to claim 7, wherein the microstructure of a steel pipe contains ferrite at a volume fraction of about 5% to about 70% and the balance substantially composed of a low temperature-transforming phase.

12. (New) The article according to claim 8, wherein the microstructure of a steel pipe contains ferrite at a volume fraction of about 5% to about 70% and the balance substantially composed of a low temperature-transforming phase.

13. (New) The article according to claim 9, wherein the microstructure of a steel pipe contains ferrite at a volume fraction of about 5% to about 70% and the balance substantially composed of a low temperature-transforming phase.

14. (New) The article according to claim 10, wherein the microstructure of a steel pipe contains ferrite at a volume fraction of about 5% to about 70% and the balance substantially composed of a low temperature-transforming phase.

15. (New) A method for manufacturing a seamless expandable oil country tubular pipe comprising:

heating a raw material for a steel pipe, the raw material containing, on a mass percent basis, about 0.010% to less than about 0.10% of C, about 0.05% to about 1% of Si, about 0.5% to about 4% of Mn, about 0.03% or less of P, about 0.015% or less of S, about 0.01% to about 0.06% of Al, about 0.007% or less of N, and about 0.005% or less of O, at least one of about 0.01% to about 0.2% of Nb, about 0.05% to about 0.5% of Mo, and about 0.05 to about 1.5% of Cr, optionally, at least one of about 0.05% to about 1% of Ni, about 0.05% to about 1% of Cu, about 0.005% to about 0.2% of V, about 0.005% to about 0.2% of Ti, about 0.0005% to about 0.0035% of B, and about 0.001% to about 0.005% of Ca, so that equations (3) and (4) are satisfied, and Fe and unavoidable impurities as the balance;

forming the pipe by a seamless steel pipe-forming process which is performed at a rolling finish temperature of about 800°C or more; and

optionally, performing normalizing treatment after pipe forming is performed by the seamless steel pipe-forming process:

$$\text{Mn}+0.9\times\text{Cr}+2.6\times\text{Mo}+0.3\times\text{Ni}+0.3\times\text{Cu}\geq 2.0 \quad (3)$$

$$4\times\text{C}-0.3\times\text{Si}+\text{Mn}+1.3\times\text{Cr}+1.5\times\text{Mo}+0.3\times\text{Ni}+0.6\times\text{Cu}\leq 4.5 \quad (4).$$

16. (New) A method for manufacturing a seamless expandable oil country tubular pipe comprising: after heating of the raw material according to claim 15 is performed and pipe forming is performed by a seamless steel pipe-forming process, holding the pipe in a region of from point A₁ to point A₃ for about five minutes or more as a final heat treatment, and then air cooling the pipe.